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REVIEW

THE CARNEGIE HISTORIES OF COMMERCE AND OF MANUFACTURES¹

STUDENTS of American economic history have awaited with eagerness the publication of the investigations made under the auspices of the Carnegie Institution of Washington into our past economic life. It was thirteen years ago that the plans for the eleven, later twelve, "divisional" studies were laid. Men qualified for the tasks were then chosen to supervise the formulation of these studies, and work was begun in 1904. But, as Professor Farnam writes in the introductory note to the volumes on commerce, "work of this kind is slow at best, and the completion of divisional volumes has been retarded in many cases, not only by the demands made upon the collaborators to undertake other responsibilities, but also by special mishaps." The first study to be issued of these "Contributions to American Economic History," as the series is to be called, was the *History of Domestic and Foreign Commerce of the United States* (1915), in two volumes, some seven hundred pages in all, prepared under the guidance of Professor Emory R. Johnson. This has been followed (1916) by an instalment of about the same bulk, altho published in a single volume, on the *History of American Manufactures*, written wholly by Dr. Victor S. Clark and covering the period 1607 to 1860. Such studies, attempting to carry further than ever before a systematic investigation of our commercial and industrial history, and sustained by the resources of the Carnegie Institution, deserve the closest

¹ E. R. Johnson and collaborators, *History of Domestic and Foreign Commerce of the United States*, vols. i and ii, Washington, Carnegie Institution of Washington, 1915, 2 vols., pp. 363, 398. Victor S. Clark, *History of Manufactures in the United States, 1607-1860*, Washington, Carnegie Institution of Washington, 1916, pp. 675, (with an Introductory Note by Henry W. Farnam).

attention of all economic students. Future numbers in the series should be scrutinized no less carefully. The contributions represent the endeavor, under the best auspices, to present American economic history in its principal aspects.

The *History of Domestic and Foreign Commerce of the United States*, to which Professor Johnson's name is attached, is avowedly the work, not of that scholar alone, but of others as well. He states in the preface that when undertaking the task in 1904 he had intended to write the whole. He found it impossible, however, to carry out this plan, and secured the assistance of Drs. T. W. Van Metre and G. G. Huebner, of the University of Pennsylvania, and of Dr. D. S. Hanchett, formerly connected with that institution. The division of work among these collaborators is roughly as follows: Professor Johnson himself wrote the earlier chapters, dealing primarily with the colonial period; Dr. Van Metre covered the parts on internal commerce, coastwise trade, and on the fisheries; Dr. (now Professor) Huebner was author of the part on foreign trade since 1789; and Dr. Hanchett was author of the final section, concerned with government aid and commercial policy. Volume I contains the parts on colonial commerce, internal commerce, and coastwise trade; and Volume II, those on foreign trade since 1879, the fisheries during the same period, and government aid and commercial policy. A glance at these titles, or better a brief inspection of the chapter headings, discloses the wide scope of the work.

Still wider appears the scope upon perusal. Matters as diverse as the commercial companies that sent out the first colonists and the present organization of the consular service, the development of the oyster culture and the expanding basis of our export trade — all find place. The purpose seems to have been to give as comprehensive and serviceable an account as possible. The commercial aspects of the colonial era have, indeed, been studied before, and have hitherto had in fact more than their share of attention; but our external or domestic trade, our fisheries, governmental assistance and commercial policy, have never had the

extended treatment here given. Monographic or briefer studies (Day, McFarland, Tower, and others) may well for some purposes be superseded. It is these formulations upon the main divisions of our commercial history that give the work its greatest value. They should be of considerable utility to the general reader, and may perhaps serve in some measure as divisional ground-plans for the more stable structure which sometime must be built. The adequacy of these plans will later be taken into account.

True, some distinct contributions are made. On certain matters information hitherto not readily available or digested is put within reach. In the study of the fisheries, Dr. Van Metre has passed the bounds of McFarland's book in some respects. He considers not merely the fisheries of the New England coast and northward, but also those of the southern, Gulf, and Pacific coasts and fishing grounds. He brings into correlation with the earlier narrative such recent material as the Census Report on Fisheries of 1908. The discussion of the Alaskan seal fisheries also contains much that is new, and the chapter on fisheries as an international question gives a good summary of the arbitration proceedings both in relation to the North Atlantic coast fisheries and the fur seals. On the whole, so far as original contribution is concerned, this section is the best in the two volumes. Comparing favorably with it, however, is the concluding part on government aid and commercial policy, written by Dr. Hanchett. The treatment of the recent history of the consular service is good, and the portions on the improvement of rivers and harbors, while general and sketchy, hold some new material. In the remaining fields, the formulation of the rather brief history of the coastwise trade is done with most originality. The analysis of the laws protecting and regulating coastwise shipping and the superficial analysis of intersectional exchange are better than what has before been brought together.

In making a just estimate of the volumes, however, it is necessary, I believe, to consider more than the contents as they stand. One should bear in mind the ideals of scholarly

work. One should take into account, further, the circumstances under which the volumes were prepared and the period over which that preparation extended. Aid was given in their elaboration by the Carnegie Institution; and they are supposedly the fruition of some ten years' prolonged, if interrupted, labor. Judged merely on the basis of scholarly method, the volumes would fare none too well. Judged by the more adequate standard of scholarly method in conjunction with the other circumstances, they must be rated as falling far short of full measure.

Throughout the volumes, there is a tendency to use readily available material, often secondary sources. Some of the latter (and of these the use is acknowledged) might indeed be legitimately utilized, since they were, to some extent, assisted in their composition by the Carnegie Institution itself. In point of fact, they are used freely: such as Professor Giesecke's little book on *American Commercial Legislation before 1789*, Dr. Tower's *History of the Whale Fisheries*, Professor J. R. Smith's *Organization of Ocean Commerce* and his *Ocean Carrier*, and Dr. C. L. Jones's *Consular Service of the United States* (1907). But these works had been already given to the public, and their utilization meant merely restatements of greater or less extent. Other works whose use is acknowledged, and which may have been assisted by the Institution, are unpublished. These include an "elaborate" and as yet unpublished account of the foreign trade of the United States, prepared by Professors S. S. and G. G. Huebner; a history of the coastwise trade, by Professor Thomas Conway; and a history of the fisheries of the United States outside of New England, written by Dr. W. S. Tower in 1906 and 1907 (i. e., before the publication of such valuable material as the Census Report on Fisheries of 1908). In other portions of the work, the bulk of the information seems to have been drawn from sources which, if not secondary, are at least readily available and require no real research. For example, McFarland's *New England Fisheries* and DuBois's *Suppression of the Slave Trade* form the basis of chapters or parts of chapters, while among sources readily

at hand should be mentioned Pitkin and Seybert, Census and other governmental publications of a statistical character, and the series of reports on various phases of domestic trade which appeared in the *Monthly Summary of Commerce and Finance* in 1899-1901. Taken as a whole, the work suffers from a lack of independent research and constructive interpretation. It will be noted that the contributions spoken of above are in the main concerned with secondary matters, the fisheries and governmental activity. Our first interest is, of course, in the histories of the foreign and domestic trades. In these, if we except the compilation of readily available statistics, and especially if we exclude the partial offerings on the coastwise trade, little new is to be found. In general, the work is of the sort which an investigator or compiler working alone and unaided might have put together, not such as to exhibit fruition of some ten years' subsidized endeavor. Where the "going" appears easy or the way has been marked out, there the exposition proceeds apace; where original investigation is necessary, there it halts. This is not the type of product anticipated from the great undertaking, and so is disappointing.¹

The work as a whole suffers also from the very method of its composition. All collaboration is difficult; but in this case the gains from collaboration hardly outweigh the evils. It will suffice to suggest a few points. The subject matter is divided longitudinally, as it were; one reads the entire history of the internal trade since 1789, and then retraces the years for a view of the foreign commerce. At the beginning, it is true, an attempt is made at cross-section work, at division by chronological periods, when two chapters, one on the fisheries

¹ In marked contrast to the methods employed in this history are those used by Professor Isaac Lippincott in his recent monograph called the *Internal Trade of the United States, 1700-1860*, published in the Washington University Studies. The title is, in fact, misleading. It is a history of commerce in the Mississippi valley. The monograph is excellent. It is thoro and represents scholarly research; it is well documented; and it makes real contributions, especially in tracing the rise of trade centers. It is to be hoped that Professor Lippincott, having extended his researches from his earlier special studies (one of which, *The History of Manufactures in the Ohio Valley up to 1860*, he wrote with the assistance of the Carnegie Institution) to this fairly broad thesis, will be able to advance further until we have a really thoroughgoing history of our domestic commerce.

and one on the coastwise traffic of that period, are included in the part on colonial commerce. But, for the period after 1789, this plan is abandoned. Some attempts are then made to tie together interdependent sections of the work; but they are either incompletely done or necessitate much repetition. Thus, the economic development of the United States since the Civil War is dealt with in the part on internal trade, receiving little or no attention in the part on foreign trade. A conspicuous example of repetition appears in the treatment of governmental activity as regard commercial treaties and aids to shipping. Chapter 30, written by Professor Huebner, on commercial treaties of the United States, deals primarily with general and special trade agreements, but also with shipping and navigation treaties; chapter 39, by Dr. Hanchett, on the policy of the United States towards shipping and ship-building, has, of course, also to include reciprocity agreements as well as other governmental assistance; and the final chapter, entitled *Tariff Provisions Concerning the Shipping and Foreign Trade of the United States* and written by Professor Huebner, contains largely repetitious material both on trade treaties and shipping agreements. Indeed, there seems to be little more justification for the insertion of this last chapter, instead of distributing such new points as are in it to their proper place than that it enables Professor Huebner to reprint (with certain additions to bring it to date, but to a large extent verbatim) an article published in the *Annals of the American Academy* for May, 1907.

Again, when repetition becomes necessary on account of the plan of the work, varying interpretations occur. For example: Professor Johnson, in discussing English colonial policy, writes (vol. i, p. 49), "The laws for the restriction of the manufacture of woolen goods, hats, and iron products, were successful, but the effects could scarcely have been important. The colonists could not have made woollens in competition with England either for export to Europe or for the intercolonial trade; nor would the manufactures of hats, if unrestricted, have had much development." Dr. Van Metre, however, in giving reasons for the small growth of

coastwise traffic in the same period, ascribes it in part to the prohibitions on manufactures (vol. i, p. 169): " Boston would unquestionably have been the center of a considerable coastwise trade in domestic woolens, had it not been for the repressive policy of England. The hat-making industry of the northern colonies was also restricted, and as a consequence there was little trade in colonial manufactures." In another case, Professor Huebner and Dr. Van Metre are in disagreement. The one (vol. ii, p. 40), stresses the poor transportation facilities, as " a powerful obstacle to the ready movement of imports and exports " during the period 1815 to 1830; while the other emphasizes improvements in transportation in that period (vol. i, pp. 213, 220) and adduces the small increase of imports during the decade of the twenties as evidence of the commencement of " a tremendous expansion of domestic trade " (p. 222). Discrepancies of this kind would not have as much weight, were there countervailing gains from the collaboration. Such, however, are not observable. There is no gain in intensity of investigation or in interpretative insight.

Matters of internal arrangement call for attention. It is open to question, for example, whether the account of the fisheries might not better have formed a separate monograph, even tho still included in this " divisional " treatise and prepared under Professor Johnson's supervision. Except in the colonial era — where a special chapter on the subject is incorporated in that part of the work and some comment is made on the West Indies trade — the history of the fisheries is nowhere linked either with internal or foreign commerce. No doubt, it fits as well into the study of commerce as into any other of the divisional groups: but the attempt to incorporate it as an integral part of a study of commerce seems a mistake. The authors, too, seem to have realized its anomalous position. In general, everything regarding government assistance to this industry, international agreements concerning it, and internal trade in its products, is kept distinct from the discussions of these subjects in relation to commerce as a whole. Everything in

regard to fisheries, except for the colonial period, is placed in the part devoted to American fisheries since 1789. Had the authors carried their views to the logical conclusion, they would have relegated this part, with the chapter on the colonial period, to the close of the second volume, and changed the title of the whole to a "History of the Domestic and Foreign Commerce and of the Fisheries of the United States."

On the other hand, cleavage is in another relation carried too far. The "coastwise" and the "internal" commerce are in reality but branches of the "domestic" trade, and of course should not be separated into individual parts. No good reason can be found for such division. In fact, the author of both sections, Dr. Van Metre, found it impossible at times to keep the two wholly within the compartments where they were placed. Note, for example, the domestic movement of cotton (vol. i, pp. 247, 251, 281).

Certain other cases of objectionable arrangement, tho of less importance, should be mentioned: the chronological division of our commercial history, foreign and domestic, at the year 1900; the separation of the chapter on commercial treaties from the part on government aid and commercial policy; and the insertion of appendices and bibliography on the colonial period, not only in the middle of a volume, but between chapters of a part.¹ Of these, of course, the first is most important. Undoubtedly, something may be said for the year 1900 as a dividing point, especially in view of the material at hand in the reports of internal trade, which appeared in the *Monthly Summary of Commerce and Finance*, as above-mentioned. Yet the choice of 1900 is not strongly defended in the work itself. Of the internal commerce, it is said (vol. i, p. 318): "The general character of the internal commerce of the United States during the opening decade of the twentieth century showed but little change;" and of the foreign trade (vol. ii, p. 86) while there has been an "extraordinary growth," . . . "the conditions existing during the closing years of the nineteenth century foreshadowed

¹ It might be further asked, what is the map on the Panama Canal routes doing alone and neglected? It is inserted (vol. ii, opposite p. 120) and is not referred to in the text, which deals with tramp and line traffic.

many of the changes which have since occurred." The year 1890 would seem on the whole more significant. The changes which then began in the character of our exports and imports, the initiation of governmental regulation, both of transportation and combination, and the reconstruction of our manufactures under the stress of combined depression and first low tariff after the Civil War — these all point to the earlier date.

Disproportionate assignment of space sometimes occurs. A conspicuous case is to be found in the chapter on the trade with our non-contiguous possessions, which receives a share of attention based on a popular rather than a scientific consideration of its importance. How much space would have been granted it, had these countries not happened to belong to the United States? It occupies in fact nearly as many pages as the discussion of our foreign trade from 1860 to 1900; while the foreign iron and steel trade during this period receives less space than the trade of the last fifteen years with Porto Rico.

Finally, omissions and inadequacies bulk large. There is an almost entire lack of study into the qualities in commerce, that is, into the kinds and grades of commodities appearing in trade movements. As a result, silk goods and glassware are treated as if at least as homogeneous as wheat or coal, and no adequate attempt is made to explain the import and export of the same group commodity — say, cotton fabrics. Again, no sufficient mention is made of the technique of fishing, such as the improvements of vessels and of fishing equipment. Comparatively little notice is given to the competition of various ports in more recent times, with the problems of differentials and port facilities; altho for the earlier period the relation between competitive coastal cities and the development of transportation facilities is pointed out. More serious than any of these, is the omission of any sufficient treatment of marketing. Altho the chapters denominated the Organization of Commerce, as regards both domestic and foreign trade, contain much that is important to the study of commerce, such as the development of com-

munication and transportation, banking and marine insurance, they ignore, for the most part, subjects that are equally pertinent, such as the rise and changes in collective and distributive centers, the growth of standardization, and especially the formulation of our present sales structure. The whole subject of marketing methods, with the exception of produce exchange and foreign export operations, is dismissed with the easy phrase, that "it will be unnecessary to discuss" these matters (vol. i, p. 300).

In sum, it may well be questioned whether the advantages and contributions of the work will enable it to survive the damaging influence of its defects. Tho it may be the fullest account of our commercial history that we have, yet its value is diminished by the indifferent, and in places even poor, quality of its composition, and by the considerable gaps in the outline. The presentation of certain new material is no doubt of importance; but the general character of the volumes, with their inadequate documentation and their great reliance on secondary and readily available sources, lowers the total worth. Especially are they disappointing as the outcome of a decade of preparation combined with the assistance of the Carnegie Institution. They would seem to represent the labor of perhaps a year or so, not of ten years. Indeed, there are unmistakable evidences, in parts, of hasty composition, particularly in relation to the English colonial policy. Thus, it is said, (vol. i, p. 86) that indigo was never "enumerated" during the colonial period. Nor does Professor Johnson always give the same interpretation of this policy. He writes in one place (vol. i, p. 107) that "it is well . . . to remember that the purpose of the mother country was to foster as well as to regulate and tax the commerce of the colonies;" but in a few pages (p. 123), he falls into the old fallacy that "the Revolution was caused primarily by the mercantile policy by means of which Great Britain sought to monopolize the trade of her colonies for the benefit of the people at home."

The value of the work as a "contribution" to American economic history must be set down as doubtful. It does not

come up to the ideals of scholarship. Little analytical or constructive acumen is manifested. The best that can be done is, perhaps, to cull from it the additions which it does make to our stock of information, for the first-rate history of our domestic and foreign commerce which is yet to be written.

The *History of Manufactures in the United States* from 1607 to 1860, written by Dr. Victor S. Clark, is in most respects different from the work already reviewed. Outwardly and inwardly the two are dissimilar. They differ in externals: Dr. Clark's book would have made two volumes of moderate thickness after the fashion of the *History of Commerce*, yet is published in a single ponderous volume of somewhat larger page. One wonders if all the studies in the series are to vary. As regards contents, the advantage is all with Dr. Clark. Whereas the collaborators of the volumes on commerce were content with easily obtainable material and with a broad, general account, he has been satisfied in the main with primary sources only and has undertaken a closer, much more detailed discussion. The thoroughness, the documentation, the carefully organized and coherent presentation of his subject all suggest the time and energy which have been put into the book and demonstrate the scholarship that directed its composition.

The *History of Manufactures* manifests distinctly the gains from single authorship. The material is dexterously made to fit into its proper place for the fulfilment of the author's purpose. The history is divided into but two main sections, the chronological periods 1607-1790 and 1790-1860. Within these main sections are arranged cross-section chapters, covering natural resources, foreign influences, and similar major sub-divisions. Under this method of organization, the industries of the country sweep forward in a body, and the vicissitudes of the individual members are merged into the onward movement of the whole. It is not a compilation of the histories of individual industries, but a narration of the gradual, steady advance of American manufactur-

ing enterprise. And this exposition is accomplished with a clarity and firmness of cohesion which only exceptional collaboration could have given.

Thoroughness of treatment is evident in all phases of the work. The main cross-sections include not only examination of natural resources and foreign influences, but also discussion of the influence of the tariff, the growth of transportation facilities, assistance from all forms of government, organization of industry, and technical progress, as well as the more usual accounts of the extent and the geographical distribution of manufactures. Particularly gratifying is the appearance of the chapters on technical progress and industrial organization. So too, not only are the more familiar manufactures dealt with, but also the somewhat neglected industries, such as flour-milling and distilling, silverware and agricultural implements, machine tools and steam engines. Special notice, finally, should be given to the bibliographical richness of the volume. All published monographs and more general studies, the letters and writings of prominent men, the archives of colonial and state governments, the treasures of the British Museum, local histories, and even the papers and account books of individual firms (it is unfortunate that Dr. Clark did not learn of the wonderful collection of the Slater records, now loaned to the Harvard Library) — are all consulted and their evidence woven into the texture of the story. Instructive appendices contain tables of prices for such products as pig iron, flour, and satinets, and an excellent bibliography of available sources.

A further point of contrast between this volume and those on Commerce is to be found in the interpretation of the assembled facts. Dr. Clark's lines of attack and his conclusion are often novel and usually suggestive. Besides his treatment of industrial organization, which will be discussed shortly, I have chosen for illustration a few other points. His discussion of the English colonial policy, in contrast to Professor Johnson's, is clear-cut, coherent, and judicial. In keeping with it, his conclusions are sound: that "upon the whole the industrial development of the colonies was about

where it would have been had their economic policies been governed by their own people. Natural influences were vastly more important than political policies in determining that development " (p. 30). Again, Dr. Clark has followed an interesting and important line of inquiry, when he traces the sources of the capital which was invested in early manufactures. The accumulations of mechanics and of the owners of small shops and mills, he finds, were used for the up-building of larger establishments. Commerce furnished another source even more considerable. But his final factor is of most interest: he writes that " industrial capital, however, has been its own chief progenitor. The high profits normally enjoyed by manufacturers supplied a surplus for new enterprises and created confidence in their success " (p. 369). The author's treatment of technical advance is likewise noteworthy. While at times he seems tempted to exaggerate the importance of American inventions, on the whole he gives foreign influence and advantage their due. His further point is novel: while, " as a matter of history," British industrial technique was for a half century " constantly so far ahead of that of the United States that our manufactures always were in the position of learners from the older country," yet " no feature of this apprenticeship . . . was more characteristic than the originality " of the latter. " This was no period of mere passive borrowing and painstaking imitation of the achievements of maturer industrial countries. Foreign inventions were assimilated as readily as foreign populations, and were speedily transformed into the machinery of a truly native system of production " (p. 262). Finally, his consideration of the tariff is gratifying. He holds no brief either for protection or free trade. He seems to attach more importance to the psychological influence of the tariff and to its influence on market stability than to any other feature of its effects. One could hardly differ from his conclusion: " The total effect of protection was to encourage manufactures; some early outgrew the benefits of this influence; others continued to be sustained solely by its support; others were more hampered than aided by the complex of con-

ditions with which this legislation surrounded their operations " (p. 312).

Such a study, with its orderliness, its thoroughness, and its stimulating interpretation is what economists had expected from the Carnegie Institution and from the investigators chosen to represent it. It covers a greater multitude of sources than a single, unaided student could well consult; and it does the work under thoughtful organization and with considerable imaginative insight.

Some particulars, however, seem to call for comment. First, it may be remarked that a certain antiquarianism is observable in the treatment of the colonial period, to which considerably over a third of the volume is devoted. A chapter, unlike any other in the book, is inserted containing a review of contemporary accounts of colonial manufactures. More important is the exaggerated emphasis placed upon manufacturing developments before the Revolution, and for that matter before the Embargo and the War of 1812. Dr. Clark's formulated conclusions as regards the colonial manufactures are conservative enough, as far as they go. He takes a position midway between the extremists, the disdainful loyalists and exuberant patriots whom he quotes, maintaining that the country was essentially self-sufficient by the time of the Revolution. This is unquestionably true; but he neglects to point out with proper force that, barring a few exceptions, it was a self-sufficiency based not upon centralized production and exchange but upon family or strictly local production. Reading the book, one feels that the commercial side of colonial manufacturing, the fortuitous or ephemeral entrance of manufactures into trade, and the emergence of short-lived establishments are "played up" too much. The true picture is given elsewhere by Dr. Clark himself, when he is speaking of the beginning of the next stage of development (p. 235);—and what he says there would of course be even more true of the colonial times. Despite some improvement in water transportation, "land communication was still expensive and difficult. Power-using manufactures were dispersed among a multitude of village water mills, thus proving their continued

dependence on adjacent materials and markets. The self-subsisting farm household remained the typical economic unit of rural America; and homespun¹ industries still supplied a large part of the nation's consumption."

Second, the division of the history of our manufactures at the year 1790, may be brought into question. No doubt, something may be said for Dr. Clark's position, but there are, I believe, objections. During the period from the adoption of the Constitution to the Embargo and War of 1812, the face of the nation was still turned toward the sea, interested primarily in the hazardous but profitable carrying trade of those troubled times, and neglecting for the most part internal development. Indeed, Dr. Clark himself admits (p. 235) that "in a very real sense the close of this period (1789-1815), rather than its beginning, marks the foundation of our manufacturing independence." Despite the advent of Slater and the Scholfields and despite other similar signs of coming change, it would seem more accurate and satisfactory to place the real commencement of our industrial activity in the period of the Embargo and War. The preceding period would then be relegated to a subordinate place as a time of preparation, when a sufficient mechanical equipment was being introduced and spread through the country, and when capital was making its first timid experiments with manufacturing enterprise.

Another disputable point arises in connection with Dr. Clark's discussion of the tariff, which on the whole is so sound. It is his conclusion that the development of large-scale production was "one cause (and it seems, an important cause) for the political decline of protection between 1833 and 1860."² As he writes (p. 281): "the centralization of manufactures in large plants and within limited areas terminated the intimacy that existed between the early manufacturing movement and the common people. Large

¹ The term "homespun industries" is unfortunately used to cover all household manufactures. See p. 335 below.

² This thesis also plays an important part in the article by Dr. Clark on "The Influence of Manufactures upon Political Sentiment in the United States from 1820 to 1860," published in the *American Historical Review* for October, 1916.

corporations were no more urgent for protection than smaller enterprises. But they represented to the public a new, strange and unwelcome power in the business world, and long before modern trusts were known they were regarded as the embodiment of monopoly, with all its attendant evils." The author's evidence, so far as it has yet been adduced, consists of two or three expressions from southern speakers or memorials, one from Philadelphia (where, as he later points out, peculiar conditions of small-scale production prevailed), and the analogy of the opposition to the Second United States Bank in the early thirties. The last is, of course, the only valid point. The same phenomenon, however, can be found at the time of the repeal of the First Bank's charter; and still we have the mounting protection of 1816-28. Indeed, as regards the only real downward step in the tariff from 1811 to 1846, namely, that of 1833, Dr. Clark admits that "this sentiment (as above expressed) was subordinate to political expedience." Thus it was at least thirty-five years after the first notable emergence of the hatred of monopoly before the force was really effective. By 1846, moreover, large-scale establishments were of considerably long standing. On the other hand, adequate explanation of that change is to be found in the public and Congressional preoccupation with the controversies arising immediately from the Mexican War and with the complex which included those controversies, the momentous slavery question. On the whole, if Dr. Clark's theory be valid (and to prove it, more evidence must be brought forward), it is a negligible factor in the interpretation of tariff changes.

Fourth, certain omissions are noteworthy. The development of marketing facilities and organization is, as I have said above, a matter of importance which should have been included mainly in the work on commerce. It is, however, closely bound with a history of manufactures also, and yet does not in this volume find adequate notice. As is the case with other points in the book, somewhat more treatment is given here than in the *History of Commerce*. For example, the subject of auction sales, a form of distribution which

caused early manufacturers and protectionists much anxiety, receives brief consideration (pp. 241-42 and 358-59). But the development of marketing methods as a whole falls between two stools, finding place neither in commercial or in industrial history. Much remains to be said concerning the development of the "orthodox" distributive organization, when, how, and why it arose, and much concerning its relation to early manufacturing enterprise. Inadequate also, as in the case of the *History of Commerce*, is the qualitative study of home manufacture and foreign importations. Something, to be sure, is here said of the character of the domestic products and occasionally something of the qualities of the goods imported. But the attention given these points is insufficient and the relation between the two is not satisfactorily emphasized. It is especially necessary, for example, in dealing with the competition of both with household production to understand clearly what each had to offer.

Finally, attention may be called to Dr. Clark's discussion of the organization of industry. That he has made it an important part of his history, co-equal with tariff changes and the volume of production, is indeed a step forward from the ordinary treatment. Yet certain exceptions must be taken to his exposition, both as regards the unusual terms employed and the concepts involved. He finds that there have been five distinguishable types of industrial organization in the United States. These he denominates severally homespun, household, workshop-craft, mill, and factory. They did not always follow one another in sequence, for to some extent, "all stages of industrial development were contemporaneous in America" (p. 443). Yet, on the whole, as his discussion shows, there was an evolution from the homespun to the factory form of production.

Some of these types are familiar concepts under new labels. For example, the "homespun" stage, defined (p. 438) as "manufacturing in the family for home use," is recognizable as what we usually call the "household" form. On the whole, moreover, the latter term remains preferable, since Dr. Clark is perforce led to include within his "homespun"

products, not only the various textile fabrics, but also hardware, furniture, shoes, tools and implements (p. 92). Second, the author's "household" stage is easily identified with an old friend: "as soon as such articles (as the above) entered neighborhood exchange," either as "domestic-commercial" or "foreign-commercial," their production was under another industrial form, the "household" industry, which is defined (p. 438) as "manufacturing in the family for outside markets." This, of course, is our old friend, the "domestic system." When Dr. Clark comes to analyze this stage more closely, he finds two different forms of organization, tho both with the technical similarity of complete fabrication within the home — namely, the manufacture for sale through the medium of the country store and the putting-out system, or the working-up of goods for a merchant manufacturer who furnishes the raw material and sells the finished product. This would rule out the term "putting-out system." But why he should have thrown over the phrase "domestic system" in favor of a term which has been heretofore applied to an entirely different form of organization, is inexplicable — especially when the former is wholly adequate and has the added value which comes from established usage. The third form of production, the "workshop-craft," or the "workshop," differs in no way from the familiar "handicraft" system. In fact, the new term is less comprehensive. It does not include the itinerant artisan, who was of considerable prominence in colonial days and disappeared but slowly. He is mentioned by Dr. Clark, yet is ignored in choosing the group name. On the whole, one cannot perceive in these cases a betterment of our accepted nomenclature, while for the many readers who are familiar with the older names and may not carefully identify the various forms in this analysis, some confusion is liable to result.¹

¹ It should be noted in passing that Dr. Clark's emphasis or preoccupation is with the structural change in industrial form, which he does not always link with the growth of the market. As a consequence, he sometimes implies a growth of technical equipment over and above the needs of the latter. Thus (p. 443) "productive capacity (of the handicraft shop) rose until it exceeded the requirements of work made to order, and even oversupplied local mercantile demand;" and afterwards there "followed an inevitable development of either the technical or the mercantile side of the shop's

Most interest attaches, however, to the insertion of the "mill" stage, or the "mill and furnace" industries. What distinguishes this form from the other types of organization? Is it in reality a separate stage in industrial development? No exact and thoro definition is attempted; but in two places the author gives some explanation. Thus (p. 164) he suggests its relation to the preceding stages: the term "mill and furnace industries," he writes, "may be applied loosely to all forms of manufacture not carried on in the household or at the work-bench." Of these industries, one class, including distilling, cloth-dyeing, and tanning, "depended for perfection upon carefully observed processes rather than upon manual skill or machinery." In another group, "skill was the main element, tho combined with some use of power machinery, as in paper-making and cloth-finishing," while occasionally "power, processes, and skill were combined, as in iron-making." But, if this is the distinction between the "mill" and the preceding forms, what is left to contrast it with the factory? Upon this point Dr. Clark touches most clearly in speaking of the textile industries (p. 447): "It is impossible to define precisely at what point the textile mill became a factory. Yet it is obvious that little spinning-shops of a few hundred spindles did not belong to the same class of industrial organizations as those of Waltham and Lowell. The question is not one of specialization, for sometimes minute establishments were as fully specialized as larger ones; nor is it a question of ownership, for important factories have belonged to individuals; nor of completeness of process, for the humblest undertakers in this field of industry made raw materials into finished cloth; nor altogether of size, for of two equally extensive establishments one might possess the features of a mill and the other of a factory. The definition depended rather upon a combination of equipment and organization." Generally speaking, after the acquisition of power-weaving, the textile mill became a factory. There was no immediate causal relation

operations. It grew into a mill, and ultimately into a larger plant or factory, or else it was embraced by merchant employers as a subordinate unit in a wider system of commercial production."

between these two facts; but usually plants devoted exclusively to spinning were "smaller, more simply equipped, and located in country communities. They followed the analogy of other mills in being owned by individuals or partners and in their relatively less systematic administration of labor." The particulars of the developed form are discussed more definitely in regard to the Boston Manufacturing Company, founded in Waltham in 1812: "Labor was specialized and workers organized by departments. Wages were paid in cash, output standardized, cost accounting introduced, and buying and selling systematized" (p. 450).

With respect to other manufactures, the distinction is not so clearly or fully stated; but on the whole it follows the same line. In the woolen industry, "with the introduction of water-carding, woolen manufactures entered the mill stage," and not until the decade of 1820-30, especially with the adoption of the Waltham system by the Middlesex Company of Lowell at the close of the decade, was the factory stage attained (p. 453). The development, in the second quarter of the century, of manufactures "requiring the mechanical production of uniform and interchangeable parts," such as the watch, sewing machine, and firearms industries, brought these forms of metal-working to the factory system, through "their wide use of power-driven automatic machinery, their systematization of processes, and their administration of labor" (p. 454). Finally, in the iron industry, the factory system was, it appears (p. 456), attained when, soon after 1830, "the technical transformation of this industry with the introduction of puddling and coal-smelting, and its commercial transformation with the growth of railways, made large plants possible and economical."

Such is the character of the "mill" stage, and such the features supposed to distinguish it from the preceding and succeeding forms. We may, then, return to our second question — is it clearly discernible as a separate stage in industrial development? To this we must return a firm negative. The indices by which Dr. Clark would distinguish the mill

from the preceding forms are not decisive. Yet certain inference may be drawn from them. The fact that the work was performed neither "in the household nor at the work-bench" and the fact that "power machinery" and "carefully observed processes" were important in mill operations would indicate that the criteria of a "factory" were there satisfied. These criteria may be stated as the labor of persons outside their homes, at hours fixed and under discipline imposed by an entrepreneur. There is agreement manifestly upon the first portion of the definition; and surely an establishment operating power machinery or carrying out definitely formulated processes is improbable, almost unthinkable, without fixed working hours and some measure of discipline. On the other hand, the difference between a "mill" and a "factory," under Dr. Clark's interpretation, is clearly only a difference of degree. Specialization of labor, cash payment of wages, standardization of product, completeness of mechanical equipment are no one of them essential features of the factory. In short, the author's fourth stage falls by the board.

Dr. Clark has called our attention, however, to an important point and has made thereby a contribution to the analysis of American industrial history. The "mill," tho not a separate industrial form, is undoubtedly a subdivision of a true form, that of the factory. Miss Hazard, in her discussion of the boot and shoe industry,¹ found it necessary to separate the "domestic" or "putting-out" system into several sub-stages, altho we have too often thought of it as possessing a single, fixed character. Now Dr. Clark has pointed out that, at least in America, we must make a subdivision of the factory stage. The mill was the early form of factory production. Later — roughly in the twenties and thirties — came the rise of the more mature form, not differing in essentials, but manifesting more of the characteristics of the modern factory system. This maturity is signalized by the changes which Dr. Clark has so clearly analyzed — the attainment of more complete technical equipment, bringing all the main processes

¹ In this Journal for February, 1913.

of a particular manufacture under the sway of power, and in the United States under one roof; the development of large-scale, uniform, systematized production; and the impersonalization of the labor contract indicated by the institution of cash payments and the gradual abolition of the mill store.

To sum up: the *History of Manufactures* is an excellent compilation. It contains practically all the evidence heretofore gathered on the industrial history of the United States up to 1860. Yet it is more than a compilation. Much time and energy have been spent in research. Untapped sources have been disclosed and their contributions interwoven with the earlier material. No doubt, monographs upon individual industries will in time present additional facts. But this volume has brought forward so much in the way of new data that it cannot hereafter be neglected in the study of any important manufacture.

Monographs, however, have a still more important function to fulfil — the assembling and single-minded presentation of the material concerning the particular industry chosen. Dr. Clark writes in his preface that “separate histories of our more important industries” were “recognized as desirable” as accompaniments of this volume. The need for them has not been decreased by this publication. Considering, however, the purpose he had in mind — the exposition of the onward sweep of general manufacturing enterprise — Dr. Clark has given a consistent, orderly, and constructive picture. The attempts made at the interpretation of the known and newly adduced facts, while more successful in some cases than in others, are at various points stimulating and suggestive. The criticisms which I have directed at the several portions of Dr. Clark’s discussion are manifestly not concerned for the most part with vital matters. The merits of the book overshadow them. The certainty of the volume’s permanent value cannot be doubted.

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